

R E M A R K S

Amendments to claims 1 and 53 remedy the problems underlying the 35 USC 112 rejections so that these can now be withdrawn.

Anticipation Rejection on Haas of Claims 1-11, 29, 30, 32-34, 39-44, 46-48, 53-58, 60-63, and 67-73

The rejection of these claims as anticipated by Haas is based on mistakes of fact as to the Haas teaching and the subject matter claimed. These claims define many distinctions not taught by Haas so that this rejection can be withdrawn.

First, the Haas support arms 152 do not hang freely downward. They slide horizontally like a door latch and are spring biased horizontally outward. They are not pivotally mounted, and they do not pivot from downward hanging positions to outwardly extended positions. These distinctions alone allow withdrawal of the Haas anticipation rejection for claims 1-11, 39-44, 46-48, 53-58, 60, and 67-73.

Spring biased is still considered "hang freely"

Second, the lock 92 of Haas engages a smooth partition wall to lock the shoe, but does not engage a projection or lance formed in a jamb wall as claimed. The lock 92 is also rectangular and not a hook as claimed. The lock 92 does not hang downwardly and is not below the shoes as claimed, since it angles upwardly from its pivot point and is biased outwardly. A spring (not 70 as asserted in the Office Action, but 102) does not retain the lock in an undeployed position, but biases it constantly into a deployed position. The Haas lock 92 is never latched by anything, let alone a spring, as claimed. These distinctions allow withdrawal of the Haas anticipation rejection for claims 5, 6, 30, 32-34, 42-44, and 61-63.

The reference number 64 that the Office Action refers to as a guide is actually an L-shaped lock carrier (column 2, line 30). Any guides for the Haas shoe differ from the guides defined in claims 36 and 46.

Anticipation Rejection on Osten of Claims 74, 75, 79-81, 85, 86, and 90

The rejection of these claims as anticipated by Osten is based on mistakes of fact as to the Osten teaching and the subject matter claimed. These claims define many distinctions not taught by Osten so that withdrawal of this rejection is now appropriate.

First, the Osten support arms transfer sash weight to sash shoes in positions that are vertically offset from lifting regions of the shoes. This is deliberately done by Osten to bias locking elements 92 out of locking position whenever the shoes support the sash weight. This offset bias of locking elements 92 not only produces deliberate moment arms turning the locking elements around horizontal axes, but it also produces similar moment arms tending to turn the shoes around horizontal axes, all for the sake of shoe locking purposes. These distinctions alone allow withdrawal of the Osten anticipation rejection for claims 74, 75, 79-81, 85, 86, and 90.

Second, the Osten sash support arms 50 never hang downward. They are constantly biased outward by springs 56, and the only time they move toward a downward position is if a sash is inserted into a window so that arms 50 are below the sash shoes and have to be raised above the sash shoes, in which case arms 50 cam inward as they pass upward against locking elements 92. When an Osten sash is lifted above the shoes, arms 50 remain biased outward to their illustrated position under the force of springs 56 so that when an Osten sash is lifted above the sash shoes, the support arms 50 do not move. This distinction allows the rejection to be withdrawn for claims 74, 75, 79-81, 85, 86, and 90.

Anticipation or Obviousness Rejection on Osten of Claims 76-78, 82-84, and 87-89

The extrusion taught by Osten is extrusion of shoe channels 14, and Osten does not teach extrusion of shoe or sash support elements. Osten's suggested shape for these elements is also inconsistent

with extrusion as a way of making such elements. By this, the Osten reference teaches away from extrusion as a way of forming shoe elements or sash support arms of metal in evenly extending profiles or forming sash support arms in different extrusion lengths. These distinctions allow withdrawal of the Osten anticipation rejection of all these claims.

The Office Action asserts that it is inherent to make shoes and arms to fit whatever size window such elements are intended, but this falls short of the claim requirements of using different lengths of evenly extending extrusions for shoe parts or extruding sash support arms in different lengths. The latter expedient allows substitution of simple and inexpensive support arms to accommodate the same sash and shoe components to different dimensions of windows, which Osten clearly does not teach.

Anticipation or Obviousness Rejection on Haas of Claims 31, 49-51, and 64-66

Haas does not teach extrusion of shoe parts or sash support arms and Haas' teaching of how such elements should be configured is inconsistent with extrusion. This alone allows withdrawal of the rejection of all these claims.

Claim 31 involves a locking hook hanging downward from a shoe, which Haas also does not teach. The locking element of Haas is not a hook, and Haas does not teach that it be extruded so that for both of these reasons, the rejection of claim 31 can be withdrawn.

Haas' failure to teach any extrusion of shoe parts justifies the withdrawal of the rejection of claims 49-51 and 64-66. In addition, these claims include further detail involving different shoe widths, shoe connection to different numbers of counterbalance elements, sash support arms of different lengths, locking hooks that hang dependently from shoes, extrusion-formed grooves in shoes to receive pivot pins, and extrusion-formed shoe slots that retain resilient latches, none of which is taught by Haas.

Obviousness Rejection on Osten of Claims 12-25

The only extrusion that Osten teaches is for shoe channels, and Osten does not suggest extrusion of shoe parts or sash support arms. Osten also does not teach shoes that have an elevational configuration extending integrally between a hook-shaped upper region and an L-shaped lower region as claimed. Osten's surface for supporting sash weight is also offset vertically from a shoe lifting region, and the Osten support surface is part of a locking element and not an integral part of an extruded shoe as claimed. Nothing in the Osten teaching would lead an ordinary worker to extrude anything but a shoe channel., Osten otherwise teaches against the claimed configuration and function of shoes and sash support arms as claimed. The configuration proposed by Osten for these elements would lead an ordinary worker away from extrusion, because the Osten proposed shapes are not extrudable. These distinctions allow withdrawal of this rejection.

Additional claim distinctions also exist and offer further grounds for withdrawing this rejection. The Osten sash support arms never pivot to downwardly hanging positions as defined in claim 15, because the Osten arms are constantly biased outward by springs 56. The Osten locking element does not engage jamb projections, and Osten does not suggest any such jamb projections as defined in claims 16-18. The Osten locking elements are also not formed as hooks and are not latched in undeployed positions out of engagement with window jambs, as defined in claim 18. The Osten shoes, besides not being extrusions, do not have mid-regions supporting guides as defined in claims 19-21; nor are such guides retained in grooves as required by claim 20; nor do the Osten shoes have extruded grooves for locking hook latches or pivot pins of locking hooks as defined in claim 21. Osten does not teach shoes formed of predeterminedly variable lengths of an extrusion, as required by claim 22, nor connection of shoes to different numbers of counterbalance elements, as defined in claim 23. Finally, Osten teaches away from extrusion of sash support arms and does not suggest that they be made in different lengths or that different

lengths of support arms have code lines that are extruded, as required by claims 24 and 25.

The Office Action mentioned the Osten guide 110, which is actually a shoe body supporting the locking element and the counterbalance spring connector. The Osten element 110 is not received in a guide retaining groove of an extrusion as required in claims 20 and 21.

Obviousness Rejection on Haas and Osten of Claims 35-38 and 45

The Office Action cites Haas for a locking slot 96, which is actually a slot in U-shaped locking detent 92 (column 2, lines 50-55). The fact that Osten suggests a shoe body 110 formed of resin has no relation to the Haas notch 96 in locking detent 92. Neither of these references suggest a resin guide mounted in a mid-region of an otherwise extruded shoe having the shape required by claims 29, 35, and 36 or claims 39 and 45. Neither of these references teach shoes formed of different widths set by predetermined lengths of the extrusion of claim 29, as required by claim 37, or shoes having different widths adapted to connect to different numbers of counterbalance elements as required by claim 38.

Obviousness Rejection on Osten of Claims 59 and 72

The Office Action cites code markings on heads of bolts as an example of size coding of elements, but such markings are not extruded and bolts are not formed by extrusion. Osten does not teach support arms of different lengths or extrusion of support arms, and Osten further does not teach coded length markings formed by extrusion on different lengths of sash support arms. The fact that other forms of size coding may be known for bolts or other elements would not lead an ordinary worker following the Osten teaching to extrude sash support arms, form the arms of different lengths, and extrude coding lines indicating the arm lengths.

Obviousness Rejection on Haas of Claim 52

Haas also does not teach different lengths of sash support arms or extrusion of sash support arms or any coding system for identifying different lengths of sash support arms. The fact that bolts, which are not extruded, can be marked with size coding symbols is insufficient to lead an ordinary worker from Haas to the extrusion of sash support arms, making sash support arms in different lengths, and extruding code lines on different lengths of sash support arms, none of which is suggested by Haas.

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For all of the above reasons, each of the rejections can be withdrawn and the application can be allowed. For any question on this, the Examiner is invited to call applicants' attorney.

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